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EXAMINER	
VELEZ, ROBERTO	
ART UNIT	PAPER NUMBER
2829	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/518,780	BRUNNER, MATTHIAS	
	Examiner	Art Unit	
	Roberto Velez	2829	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 January 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *30,31 and 33-58* is/are pending in the application.

4a) Of the above claim(s) *33-36,38,46 and 47* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *30,31,37,39-45 and 48-58* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *17 December 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *See Continuation Sheet*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :12/17/2004,03/17/2005,05/16/2005.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 01/30/2008 has been entered.

Response to Arguments

2. Applicant's arguments filed 01/30/2008 have been fully considered but they are not persuasive.

3. In response to applicant's argument that an amendment made to independent claims 30, 42, 50 and 55 was made to distinguished the claims from the prior art, a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. By merely adding functionality language (i.e. "the drive circuit configured **for** receiving external signals and for providing modified signals **for** the matrix picture elements during normal operation and during test mode) to the drive circuit does not structurally differentiate it from the applied prior art.

4. In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

5. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., separating the test pads from the operational pads) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

6. Applicant also argues that the combination of Jenkins and Kim et al. fails to disclose a first arrangement of contact areas connected with the input terminals of the drive circuit, wherein the first arrangement of contact areas serves for picture generation during normal operation. In response to applicant's argument that the combination of Jenkins and Kim et al. fails to disclose wherein the first arrangement of contact areas serves **for** picture generation during normal operation, a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from

the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In addition, Jenkins et al. shows (Fig. 3) a first arrangement of contact areas 29 connected with the input terminals [301] of the drive circuit 19. Jenkins et al. failed to disclose wherein the first arrangement of contact areas serves for picture generation during normal operation. Kim et al. was used to teach that an arrangement of contact areas could be used for picture generation during normal operation. Kim et al. discloses "the gate and data pads are directly connected to external driving ICs to receive scanning signals (during test mode) and picture signals (during normal operation) from the outside" (Col. 1, Ln 35-38). Therefore, it would have been obvious to one ordinary skill in the art at the time the invention was made to incorporate the teachings of Kim et al. into the device of Jenkins et al. by using the first arrangement of contact areas for picture generation during normal operation. The ordinary artisan would have been motivated to modify Jenkins et al. in the manner set forth above for the purpose of being able to use the device and test it simultaneously for the purpose of saving time.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claim 42-45, 48 and 56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jenkins et al. (US Pat. 6,437,596).

Regarding claim 42, Jenkins et al. shows (Figures 1A-3) an arrangement of test contact areas for providing signals for generating a test pattern to an optoelectronic device comprising a matrix of picture elements, comprising: at least one pad [29]; at least one connection of the at least one pad [29] with a drive circuit [19] directly or via another component, wherein the drive circuit [19] is provided with signals via an arrangement of operational contact areas [29] during normal operation, the drive circuit [19] is configured for receiving external signals (from probe fixture 40) and for providing modified signals for the matrix picture elements [12] during normal operation and during test mode (Col, 7, Ln 39-63 disclose that probe pad 23, select logic 301 and control pads 29 may be integrated into the driving scheme for the array during normal operation and driving circuit 19 is also used in performing test routines for the cells of the array); and the arrangement of test contact areas [23] is configured for providing signals for generating a test pattern during test mode (Col. 1, Ln 33-37 and Col. 6, Ln 33-41).

Jenkins et al. is silent about disclosing wherein the arrangement of test contact areas [23] is larger than the arrangement of operational contact areas [29].

It would have been obvious to one ordinary skill in the art at the time the invention was made to have an arrangement of test contact areas larger than the arrangement of operational contact areas since such a modification would have involve a mere change in size of a component. A change in size is generally recognized as being within the level of ordinary skill in the art. The ordinary artisan would have been motivated to modify Jenkins et al. in the manner set forth above for the purpose of reducing the cost of the inspection device by reducing the number of probes and pads.

Regarding claim 43, Jenkins et al. discloses everything as claimed above in claim 42; in addition, Jenkins et al. shows (Fig. 3) wherein: the drive circuit [19] has input terminals [301] and output terminals [DL_0-DL_3, 32_0-32_3], and wherein the at least one connection [29] is connected with at least one of the input terminals [301].

Regarding claim 44, Jenkins et al. discloses everything as claimed above in claim 42.

Jenkins et al. is silent about disclosing wherein the at least one pad of the arrangement of test contact areas has a dimension of at least 100μm.

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to have the second pads of the second arrangement of contact areas have a dimension of at least 100μm, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. Also, it would be obvious for the purpose of reducing the space occupied by the inspection device.

Regarding claim 45, Jenkins et al. discloses everything as claimed above in claim 42; in addition, Jenkins et al. shows (Figures 1A and 3) wherein: the number of pads of the arrangement of test contact areas [23] is at most 90% of the number of pads of the arrangement of operational contact areas [29].

Regarding claim 48, Jenkins et al. discloses everything as claimed above in claim 42; in addition, Jenkins et al. shows (Fig. 3) wherein: the arrangement of test contact areas [23] is directly connected with the drive circuit [19].

Regarding claim 56, Jenkins et al. shows (Figures 1A-3) a method for manufacturing a drive electronics of an optoelectronic device having a matrix of picture elements, comprising: a) providing a drive circuit [19] configured for receiving external signals (from probe fixture 40) and for providing modified signals for the matrix picture elements [12] during normal operation and during test mode (Col, 7, Ln 39-63 disclose that probe pad 23, select logic 301 and control pads 29 may be integrated into the driving scheme for the array during normal operation and driving circuit 19 is also used in performing test routines for the cells of the array); b) connecting control lines [18] of the matrix of picture elements (array of 12) with output terminals [DL_0-DL_3, 32_0-32_3] of the drive circuit [19]; c) providing a first arrangement of contact areas [29], wherein the first arrangement of contact areas [29] provides signals to the drive circuit [19] during operation mode (Col. 5, Ln 47-54 and Col. 7, Ln 39-52); d) connecting the first arrangement of contact areas [29] with input terminals [301] of the drive circuit [19]; e) providing a second arrangement of contact areas [23], wherein said second arrangement of contact areas [23] serve for pattern generation during test mode (Col. 1, Ln 33-37 and Col. 6, Ln 33-41); and f) connecting the second arrangement of contact areas [23] with input terminals [301] of the drive circuit [19] directly or via another component.

Jenkins et al. is silent about disclosing second arrangement of contact areas [23] being larger than the contact areas of said first arrangement of contact areas [29].

It would have been obvious to one ordinary skill in the art at the time the invention was made to have second arrangement of contact areas being larger than the

contact areas of said first arrangement of contact areas since such a modification would have involve a mere change in size of a component. A change in size is generally recognized as being within the level of ordinary skill in the art. The ordinary artisan would have been motivated to modify Jenkins et al. in the manner set forth above for the purpose of reducing the cost of the inspection device by reducing the number of probes and pads.

9. Claim 30-31, 37, 39-41, 49-52, 55 and 57-58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jenkins et al. (US Pat. 6,437,596) in view of Kim et al. (US Pat. 6,636,288).

Regarding claim 30, Jenkins et al. shows (Figures 1A-3) a drive electronics for driving an optoelectronic device with a matrix of picture elements, comprising: a drive circuit, wherein the drive circuit [19] comprises input terminals [301] and output terminals [DL_0-DL_3, 32_0-32_3], wherein the drive circuit [19] is configured for receiving external signals (from probe fixture 40) and for providing modified signals for the matrix picture elements [12] during normal operation and during test mode (Col, 7, Ln 39-63 disclose that probe pad 23, select logic 301 and control pads 29 may be integrated into the driving scheme for the array during normal operation and driving circuit 19 is also used in performing test routines for the cells of the array); a first arrangement of contact areas [29] connected with the input terminals [301] of the drive circuit [19]; and a second arrangement of contact areas [23] connected with the input terminals [301] of the drive circuit [19] directly or via another component, the second arrangement of contact areas

[23] serves for pattern generation during test mode (Col. 1, Ln 33-37 and Col. 6, Ln 33-41).

Jenkins et al. is silent about disclosing wherein the contact areas of the second arrangement of contact areas [23] are larger than the contact areas of the first arrangement of contact areas [29].

It would have been obvious to one ordinary skill in the art at the time the invention was made to have contact areas of the second arrangement of contact areas larger than the contact areas of the first arrangement of contact areas since such a modification would have involve a mere change in size of a component. A change in size is generally recognized as being within the level of ordinary skill in the art. The ordinary artisan would have been motivated to modify Jenkins et al. in the manner set forth above for the purpose of reducing the cost of the inspection device by reducing the number of probes and pads.

Jenkins et al. fails to disclose wherein the first arrangement of contact areas serves for picture generation during normal operation. However, Kim et al. discloses wherein the first arrangement of contact areas serves for picture generation during normal operation (Col 1, Ln 35-38).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Kim et al. into the device of Jenkins et al. by using the first arrangement of contact areas for picture generation during normal operation. The ordinary artisan would have been motivated to modify Jenkins et

al. in the manner set forth above for the purpose of being able to use the device and test it simultaneously for the purpose of saving time.

Regarding claim 31, the combination of Jenkins et al. and Kim et al. discloses everything as claimed above in claim 30.

The combination of Jenkins et al. and Kim et al. is silent about disclosing wherein: the number of input terminals of the drive circuit by which the drive circuit is connected with the second arrangement of contact areas is at most 5% of the number of output terminals of the drive circuit by which the drive circuit is connected with the control lines of the matrix of picture elements.

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to have the number of input terminals of the drive circuit by which the drive circuit is connected with the second arrangement of contact areas is at most 5% of the number of output terminals of the drive circuit by which the drive circuit is connected with the control lines of the matrix of picture elements, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. Also, it would be obvious for the purpose of reducing the cost of the inspection device.

Regarding claim 37, the combination of Jenkins et al. and Kim et al. discloses everything as claimed above in claim 30; in addition, Jenkins et al. shows (Fig. 3) wherein: the second arrangement of contact areas [23] is directly connected with the drive circuit [19].

Regarding claim 39, the combination of Jenkins et al. and Kim et al. discloses everything as claimed above in claim 30; in addition, Jenkins et al. shows (Figures 1A and 3) wherein: the first arrangement of contact areas [29] comprises one or more first pads, the second arrangement of contact areas [23] comprises one or more second pads, and the number of second pads of the second arrangement of contact areas [23] is at most 90% of the number of first pads of the first arrangement of contact areas [29].

Regarding claim 40, the arguments used for the rejection of claims 30 and 39 regarding this feature, also apply.

Regarding claims 41, the combination of Jenkins et al. and Kim et al. discloses everything as claimed above in claim 30.

The combination of Jenkins et al. and Kim et al. is silent about disclosing wherein the second pads of the second arrangement of contact areas have a dimension of at least 100μm.

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to have the second pads of the second arrangement of contact areas have a dimension of at least 100μm, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. Also, it would be obvious for the purpose of reducing the space occupied by the inspection device.

Regarding claim 49, the combination of Jenkins et al. and Kim et al. discloses everything as claimed above in claim 30; in addition, Jenkins et al. shows (Figures 1A-

3) an optoelectronic device, comprising: a matrix of picture elements (array of 12); and a drive electronics [19] according to claim 30.

Regarding claim 50, Jenkins et al. shows (Figures 1A-3) a method for testing an optoelectronic device, comprising: a) making contact (using probes) between an external control [40, 46] and an arrangement of test contact areas [23] which are larger than operational contact areas [29]; b) providing an input terminal [301] of a drive circuit [19] directly or via another component with input signals via the arrangement of test contact areas [23] to generate a test pattern on a matrix of picture elements (array of 12) (Col. 1, Ln 33-37 and Col. 6, Ln 33-41), the drive circuit [19] is configured for receiving external signals (from probe fixture 40) and for providing modified signals for the matrix picture elements [12] during normal operation and during test mode (Col, 7, Ln 39-63 disclose that probe pad 23, select logic 301 and control pads 29 may be integrated into the driving scheme for the array during normal operation and driving circuit 19 is also used in performing test routines for the cells of the array); and c) testing the picture elements [12] of the matrix of picture elements (Col. 1, Ln 33-37).

Jenkins et al. is silent about disclosing wherein test contact areas [23], which are larger than operational contact areas [29].

It would have been obvious to one ordinary skill in the art at the time the invention was made to have test contact areas, which are larger than operational contact areas since such a modification would have involve a mere change in size of a component. A change in size is generally recognized as being within the level of ordinary skill in the art. The ordinary artisan would have been motivated to modify

Jenkins et al. in the manner set forth above for the purpose of reducing the cost of the inspection device by reducing the number of probes and pads.

Jenkins et al. fails to disclose wherein the drive circuit is provided with signals for picture generation during operation via the operational contact areas connected to the input terminal of the drive circuit. However, Kim et al. discloses wherein the operational contact areas connected to the input terminal of the drive circuit provide signals for picture generation during operation (Col 1, Ln 35-38).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Kim et al. into the device of Jenkins et al. by using the operational contact areas for picture generation during operation. The ordinary artisan would have been motivated to modify Jenkins et al. in the manner set forth above for the purpose of being able to use the device and test it simultaneously for the purpose of saving time.

Regarding claim 51, the combination of Jenkins et al. and Kim et al. discloses everything as claimed above in claim 50; in addition, Jenkins et al. discloses wherein: the input signals [301] generate a periodic test pattern (Col. 6, Ln 33-41).

Regarding claim 52, the combination of Jenkins et al. and Kim et al. discloses everything as claimed above in claim 50; in addition, Jenkins et al. discloses wherein: the input signals [301] generate a vertically, horizontally or diagonally periodic test pattern (Col. 6, Ln 28-33).

Regarding claim 55, the combination of Jenkins et al. and Kim et al. discloses everything as claimed above in claim 50; in addition, Jenkins et al. shows (Fig. 1A and

3) wherein step c) comprises the following steps: c1) testing (using 46, 40 and probes) the picture elements [12] in a portion of the matrix of picture elements; c2) shifting (using [301]) the optoelectronic device; and c3) testing (using 46, 40 and probes) the picture elements [12] in a further portion of the matrix of picture elements.

Regarding claim 57, the combination of Jenkins et al. and Kim et al. discloses everything as claimed above in claims 30 or 50; in addition, Jenkins et al. shows (Fig 1B) an optoelectronic device (array of 12).

Regarding claim 58, the combination of Jenkins et al. and Kim et al. discloses everything as claimed above in claim 49; in addition, Jenkins et al. discloses wherein at least parts of the second arrangement of contact areas [23] are removed (Col. 7, Ln 39-52).

10. Claim 53 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jenkins et al. (US Pat. 6,437,596) and Kim et al. (US Pat. 6,636,288) as applied to claim 50 above, and further in view of Henley (US Pat. 5,432,461).

Regarding claim 53, the combination of Jenkins et al. and Kim et al. discloses everything as claimed above in claim 50.

The combination of Jenkins et al. and Kim et al. fails to disclose wherein the picture elements are tested with a beam of charged particles or laser radiation. However, Henley shows (Fig. 1) wherein the picture elements are tested with a beam of charged particles or laser radiation.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Henley into the device of the

combination of Jenkins et al. and Kim et al. by testing the picture elements with a beam of charged particles or laser radiation. The ordinary artisan would have been motivated to modify the combination of Jenkins et al. and Kim et al. in the manner set forth above for the purpose of testing the picture elements without using mechanical contact in order to avoid material corrosion.

11. Claim 54 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jenkins et al. (US Pat. 6,437,596) and Kim et al. (US Pat. 6,636,288) as applied to claim 50 above, and further in view of Kim (US Pat. 6,486,927).

Regarding claim 54, the combination of Jenkins et al. and Kim et al. discloses everything as claimed above in claim 50.

The combination of Jenkins et al. and Kim et al. fails to disclose the step of: a vacuum is generated in the vicinity of the optoelectronic device to be tested. However, Kim discloses wherein a vacuum is generated in the vicinity of the optoelectronic device to be tested (Col 5, Ln 43-48).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Kim into the device of the combination of Jenkins et al. and Kim et al. by providing a vacuum is generated in the vicinity of the optoelectronic device to be tested. The ordinary artisan would have been motivated to modify the combination of Jenkins et al. and Kim et al. in the manner set forth above for the purpose of attaching and securing the optoelectronic device to a stage while testing it.

Conclusion

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Roberto Velez whose telephone number is 571-272-8597. The examiner can normally be reached on Monday-Friday 8:00am- 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ha Nguyen can be reached on 571-272-1678. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Roberto Velez/
Examiner, Art Unit 2829

/Ha T. Nguyen/

Supervisory Patent Examiner, Art Unit 2829